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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/619,256

07/14/2003

Timo Kalevi Korpela

Korpela I

6902

7590

10/12/2006

John Dodds
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EXAMINER

KHANNA, HEMANT

ART UNIT

PAPER NUMBER

1654

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,256

Applicant(s)

KORPELA ET AL.

Examiner

Hemant Khanna

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1654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of claims 1-4, 6-7 that belong to Group I in the reply filed on August 25, 2006 is acknowledged. Amendments to the claims 1-16 is acknowledged. Applicant's amendments to the claims that render the restriction between Groups I, II, III, and V moot is acknowledged. Further, the addition of the new claim 17 depending on claim 2, amendments to claims 3, and 5 so as to be dependent on claim 17, and cancellation of claim 4 is acknowledged.

Applicant's argue that the products of Group I, II, III, and V overlap in scope (See page 10-12 of Remarks and Arguments). Based on the Applicant's arguments and amendments to the claims that read on the products of Group I, II, III and V, the Restriction between inventions of Group I, II, III, and V is withdrawn.

Applicant's further argue that the restriction between the products of Group I, II, III, V and the method of Group IV is improper. Applicant's argue that the shortness of the peptides cannot be used in the materially different process of producing antibodies. The applicant's arguments are not found persuasive. The Examiner respectfully points out that the peptide having the claimed sequence of the instant invention can be utilized to locate epitopes of immunological importance useful for a variety of diagnostic applications involving the detection of Hepatitis GB Virus (HGBV, abstract, column 26, Example 1; column 39-40, SEQ ID NO:5, residues 10-13, USPN 5,843,450). Based on the Examiners arguments that the products of Group I, II, III, V and the method of Group IV are patentably distinct, the restriction between the product Groups and the method Group IV is maintained.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-17 are pending.

Based on the Applicant's arguments (above) that the products of Group I, II, III and V are the same, the elected species of SEQ ID NO:1, SEQ ID NO: 4 and SEQ ID NO:4 must all be drawn to the broad Group of products, while being previously drawn to Groups I, II and III. Hence in accordance with the election of species requirement, Applicant is allowed only one species should no generic claim be finally held allowable.

Applicant elected the species having the amino acid sequence of Ala-Thr-Ala-Thr-Leu-Val (SEQ ID NO: 1), which belongs to the invention of Group I and is embraced by claims 3, 17, 2 and I. Applicant's species has not been found free of the prior art and the claims 3, 17, 2 and I stand rejected under 35 USC 102 as set forth below.

For the benefit of the Applicant, additional species were also examined. Hence, Thr-Ala-Thr-Val-Thr-Val (SEQ ID NO:5), and TTKL (SEQ ID NO: 4) were examined.

Applicant's species of SEQ ID NO:5 has not been found free of the prior art and claims 1, 2, 5, and 17 stand rejected under 35 USC 102 as set forth below. Applicant's species of SEQ ID NO:4 has not been found free of the prior art and claims 6-8 stand rejected under 35 USC 102 as set forth below.

Claims 9-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. Election was made **with** traverse in the reply filed on August 25, 2006.

Specification

2. The disclosure is objected to because of the following informalities: the absence of SEQ ID NO:'s after all amino acid sequences is inconsistent with the disclosure rules. See 37 CFR 1.821 (d). Such sequences are present on page 20 of the specification and in the claims. Appropriate correction is required.

Claim Objections

3. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 recites limitations on a pathogenic bacterium, which does not further limit structurally the peptide of claim

1. The peptide of claim 1 does not comprise a Gram-negative bacteria, instead it recites a structural correlation to adhesive organelle in Gram-negative bacteria.

4. Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

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dependent form, or rewrite the claim(s) in independent form. Claim 17 recites limitations on the structure of the adhesive organelle of Gram-negative bacteria. However, the antimicrobial peptide of claim 2 does not comprise the adhesive organelle of Gram-negative bacteria.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 15-16 are indefinite because it is not clear what is intended by using "further consisting" to define an inhibitor. It is not clear what was included in the inhibitor molecule that is now being included as a possible "further" addition.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 17 rejected under 35 U.S.C. 102(b) as being anticipated by Hultgren et al (USPN 6,001,823).

The claims are drawn to an antimicrobial peptide comprising the sequence of Ala-Thr-Ala-Thr-Leu-Val represented by SEQ ID NO:1.

Hultgren et al disclose peptides that define the binding site of the interaction between a chaperone PapD and pilus subunits for use as inhibitors of pilus assembly in the treatment of patients infected by bacteria from the group consisting of *Escherichia coli* and *Yersinia* (column 9, lines 1-10; column 8, lines 33-45). Further, Hultgren et al teach a peptide that comprises the instant's SEQ ID NO:1 as represented by SEQ ID NO:13 (Table 1, column 49), thus meeting all the limitations of claims 1-3, and 17.

7. Claims 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Wang L. et al (WO 02/077183).

The claim is drawn to a peptide comprising the sequence of Thr-Ala-Thr-Val-Thr-Val represented by SEQ ID NO:5.

Wang L. et al disclose a peptide with SEQ ID NO: 64876 with registry NO: 477120-68-6 that comprises the sequence of Thr-Ala-Thr-Val-Thr-Val. Wang L. et al further disclose that the instant sequence aligns with the sequence of Wang L. et al at positions 151-156, thus meeting all the limitations of claim 5.

8. Claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochheimer A. et al (Eur. J. Biochem (1995) 234:910-920).

The claim is drawn to a peptide comprising the sequence of TTKL represented by SEQ ID NO:4.

Hochheimer A. et al disclose the internal peptides of the protein FmdB obtained by endoproteinase Lys-C digestion, which contain the sequence TTKL at positions 14-17 in peptides 5 and 6 (Table 1, page 912), thus meeting all the limitations of claim 6-8. To the extent that the Applicant utilized the same sequence denoted by SEQ ID NO:4, as was utilized by Hochheimer A. et al., the teachings of Hochheimer A. would inherently result in the claimed properties of inhibiting polymerization of Dr. haemagglutinin.

Conclusion

9. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemant Khanna whose telephone number is (571) 272-9045. The examiner can normally be reached on Monday through Friday, 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

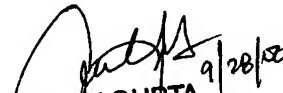
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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Hemant Khanna
September 27, 2006



ANISH GUPTA
PRIMARY EXAMINER